

**Meeting of the Central Valley Flood Protection Board
September 19, 2008**

**Draft Staff Report
DWR Floodway Protection Section**

Item

Consider approval of Permit No. 18400 (Attachment A) to replace existing Weir No. 2 and fish ladder with new weir and fish ladder within the Bypass; place fill and a concrete pad for new control building on the landside slope of the east bank levee of the Sutter Bypass.

Applicant

Department of Water Resources, Division of Flood Management

Location

The project is located east of Meridian on McClatchy Road. (Sutter Bypass, Sutter County see Attachment B).

Description

To replace existing Weir No. 2 and fish ladder with new weir and fish ladder within the Bypass; place approximately 2,000 cubic yards of fill and a 22- by 26-foot concrete pad for new 12- by 16-foot control building on the landside slope of the east bank levee of the Sutter Bypass.

Discussion

Weir No. 2 is an integral part of the water management system of the Sutter Bypass. It was built in 1946 to replace a timber flashboard dam that was washed out by floods. The concrete structure consists of 12 bays containing wooden flashboards that control the upstream water elevation of the East Borrow Canal (EBC). There is also a fish ladder associated with the weir that allows for the passage of fish.

Over 60 years of wear have taken a toll on Weir No. 2. A structural analysis was performed in July of 2001 that discovered a large hole in the apron on the downstream side of the weir. The weir leaks excessively and maintaining an upstream operating

stage for diversions during low flows may not be possible. Furthermore, the current fish ladder does not meet current NOAA and DFG fish passage criteria.

Agency Comments and Endorsements:

- The U. S. Army Corps of Engineers endorsement has not been received but is anticipated to be received prior to the September 19, 2008 Board meeting.
- Sutter Maintenance Yard has endorsed this application.

CEQA Findings:

Board staff has prepared the following CEQA findings:

The Board, acting as a responsible agency under CEQA, has independently reviewed the Initial Study, Mitigated Negative Declaration and mitigation measures (June 2008) for the Department of Water Resources' (DWR), Sutter Bypass East Borrow Canal Water Control Structures Project (SCN 2008062058) prepared by the lead agency, DWR. The Initial Study, Mitigated Negative Declaration, and mitigation measures may be viewed or downloaded from DWR's Fish Passage Improvement, Lower Butte Creek Projects website at

<http://www.watershedrestoration.water.ca.gov/fishpassage/projects/lowerbutte.cfm>.

The Initial Study evaluates two sites on the East Borrow Canal the Willow Slough Weir / Denil Fish Ladder and Weir No. 2. For purposes of application for U.S. Army Corps of Engineers Section 404 and Central Valley Flood Protection Board permits the project was split into two parts. Weir No. 2 and fish ladder are the subject of this application while the Willow Slough Weir and Denil Fish Ladder are the subject of application #18399. The two weirs are 14 miles apart on the East Borrow Canal and maintain water surface elevations on the canal that are adequate for irrigation diversions by water right holders.

Mitigation Measures

Mitigation measures were incorporated into the project design to reduce potentially significant impacts to less than significant. Mitigation measures are listed as follows:

- Fish Passage: At Weir No. 2 the existing fish ladder will operate until new fish ladder is complete.
- Fish Rescue and Relocation: DWR will rescue fish from cofferdammed construction areas by using seines and dipnets. Fish relocation operations are expected to minimize project impacts to all special-status fish species by removing them from areas where they would have experienced high rates of injury or mortality.
- Water Conveyance: Normal flows will continue past construction areas to provide baseline conditions to aquatic resources downstream.

- Storm Water Pollution Prevention Plan (SWPPP) and a Spill Prevention and Countermeasure Plan: The implementation of a SWPPP and a Spill Prevention and Countermeasure Plan will greatly reduce the potential for these adverse effects to occur by implementing the best available preventative measures.
- Verify new fish ladder designs meet engineering specifications: The fish ladder designs were approved by NOAA Fisheries and DFG. DWR surveyors will ensure that ladders are built according to DFG and NOAA Fisheries-approved specifications.
- Verify hydraulic conditions in new fish ladders meet fish passage criteria: Physical measurements will be taken to verify that fish ladders meet NOAA Fisheries and DFG fish passage criteria for target fish species and lifestages.
- Verify fish are successful in navigating through fish ladder: Underwater imagery will be used to show successful passage of adult salmonids. The details of the fisheries monitoring plan will be created according to NOAA Fisheries needs.
- Pre-construction avian surveys will be conducted in the project area. If nests are found within or near the project area, DWR will consult with USFWS and/or DFG to implement protective measures.
- Obtain pre-project photographs of project area and surroundings: DWR will establish a baseline of conditions prior to construction activities
- Determine species composition and stand characteristics of existing vegetation that will be impacted: DWR will determine goals for the revegetation effort
- Mark off areas of vegetation that are to be avoided by construction machinery: DWR will restrict work areas to reduce impacts to vegetation from machinery and personnel.
- Conduct weekly inspection to ensure areas outside construction area have remained undisturbed: Inspections will reduce the chance of accidental disturbance.
- Conduct post-project monitoring surveys of re-planted vegetation: DWR will count and measure planted riparian vegetation to determine survivorship, species composition, and canopy cover.
- Restrict work windows to Giant Garter Snake (GGS) active season: The selected work window will avoid inactive (hibernating) snakes that could be injured by construction while they are unable to escape from underground dens
- Conduct an environmental awareness training session for construction personnel: A US Fish and Wildlife Service (USFWS) approved biologist will instruct workers on how to identify Giant Garter Snakes and their habitat, how they can minimize take of the snake, what to do if they encounter a snake, and any additional terms of environmental documents obtained for the project.
- Construction sites in streambeds will be dewatered for at least 15 days prior to start of construction in areas with Giant Garter Snake habitat: Dewatering will

encourage any resident Giant Garter Snakes to leave the aquatic portion of the construction area.

- Project area will be surveyed for Giant Garter Snakes: A biological monitor will be available to determine if snakes are present in construction area. Surveys will be repeated if a lapse in construction activity of two weeks or greater occurs.
- If a Giant Garter Snake is observed, construction activities will be redirected to another portion of the project area until the snake has moved away on its own: This action will avoid take of Giant Garter Snakes.
- No plastic, monofilament, jute, or similar erosion matting that could entangle snakes will be used on the project site: This action will avoid injury to Giant Garter Snakes.
- The worksite will be kept free of trash that could attract predators of Giant Garter Snakes to the area: This action will avoid increasing predation on Giant Garter Snakes.
- After completion of construction activities, any temporary fill and construction debris will be removed: All uplands involved in the project (staging areas, construction sites, access roads, levees) will be restored using a native grass and forb seed mixture. This action will restore Giant Garter Snake habitat to pre-construction conditions.
- Conduct post-project monitoring surveys of re-seeded upland areas: DWR will measure cover and species composition to monitor revegetation and re-seed if necessary.

Impact Avoidance and Minimization Measures

Impact avoidance and minimization measures to waters of the United States and to federally listed species are summarized as follows:

- Size of construction area was reduced to minimize dewatered area and avoid impacts to streambed
- Planned removal of mature riparian trees was eliminated to avoid impacts to riparian forest.
- A proposed fish exclusion screen at the downstream entrance to Willow Slough was eliminated due to potential effects on Waters of the U.S. and on listed fish species.
- The boundaries of staging areas were modified to minimize impacts to Giant Garter Snake habitat by moving them farther from aquatic habitats
- Project scheduling was altered to restrict construction to periods that would avoid impacts to Giant Garter Snake by restricting all activity to Giant Garter Snake active season.
- Project schedule was modified to avoid impacts to fish and Giant Garter Snake.

- Best Management Practices were incorporated into project plan to minimize impacts to Waters of the U.S. caused by soil erosion
- All vehicle movement to/from construction site will be on existing roads to minimize impacts to Waters of the U.S.

Mandatory Findings of Significance

The project will not significantly change the existing environment because it is largely confined to previously disturbed areas, and the objective of the project is replacement of existing structures. Loss of Giant Garter Snake habitat will be mitigated by purchasing replacement mitigation lands at an approved Giant Garter Snake mitigation bank. Potential impacts to other special-status fish, birds, reptiles, and plants have been identified but proposed avoidance and mitigation measures, which are described in the “Biological Resources” section of the Initial Study, will reduce or eliminate the potential impacts to less than significant or avoid them completely.

Based on its independent review of DWR’s Initial Study and Mitigated Negative Declaration the Board finds that although the proposed project could have significant environmental impacts there will be no significant impacts in this case because DWR has incorporated mandatory mitigation measures into the project plans that will reduce the level of significance to less than significant after mitigation.

Section 8610.5 Compliance

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

This project has no effects on the State Plan of Flood Control.

An important objective of the project is to improve regulation of flows through the weirs by replacing the existing water control structures with new structures. Flows in the East Borrow Canal are regulated primarily to alleviate flooding in the Sacramento Valley resulting from excessive flows in Butte Creek and the Sacramento and Feather Rivers, and to accommodate diversions by water right holders along the canal and allow landowners to drain their fields during certain times of the year. The project will not substantially alter flows in the East Borrow Canal or Willow Slough because the water surface elevation of these waterways will be regulated and maintained throughout the duration of the project.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

None.

Staff Recommendation

Staff recommends that the Board adopt the CEQA findings, approve the permit, and direct staff to file a Notice of Determination with the State Clearinghouse.

List of Attachments

- A. Permit
- B. Location maps and photos

DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18400 BD

This Permit is issued to:

Department of Water Resources, Division of Flood Management
3310 El Camino Avenue, Suite 110
Sacramento, California 95821-9000

To replace existing Weir No. 2 and fish ladder with new weir and fish ladder within the Bypass; place approximately 2,000 cubic yards of fill and a 22- by 26-foot concrete pad for new 12- by 16-foot control building on the landside slope of the east bank levee of the Sutter Bypass. The project is located east of Meridian on McClatchy Road (Section 33, T15N, R2E, MDB&M, Sutter Maintenance Yard, Sutter Bypass, Sutter County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and the Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right

to change any conditions in this permit as may be consistent with current flood control standards and policies of the Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 day's notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by the Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of the Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18400 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee shall be responsible for repair of any damages to the Sutter Bypass levees due to construction, operation, or maintenance of the proposed project.

FIFTEEN: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

SIXTEEN: The permittee shall contact the Department of Water Resources by telephone, (916) 574-1213, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

SEVENTEEN: Cleared trees and brush shall be completely burned or removed from the Sutter Bypass, and downed trees or brush shall not remain in the Sutter Bypass during the flood season from November 1 to April 15.

EIGHTEEN: No material stockpiles, temporary buildings, or equipment shall remain in the Sutter Bypass during the flood season from November 1 to April 1.

NINETEEN: The proposed utility poles and guy anchors shall be located a minimum distance of 10

feet from the landside levee toe.

TWENTY: A minimum clearance of 21 feet shall be provided between the Sutter Bypass Levee crown and the overhead wire crossing. Power cables over 750 volts shall have a minimum clearance of 25 feet.

TWENTY-ONE: The proposed railing fence shall be installed perpendicular to the centerline of the levee.

TWENTY-TWO: Debris that may accumulate on the railing fence shall be cleared off and disposed of outside of the Sutter Bypass after each period of high water.

TWENTY-THREE: Any locks on the swing gates must be accessible to maintenance and inspection personnel and must not be casehardened.

TWENTY-FOUR: Keys shall be provided to the Department of Water Resources' Flood Project Integrity and Inspection Section for all locks on gates providing access to the floodway, levee ramp, levee toe, and along the levee crown.

TWENTY-FIVE: Any damage to the Sutter Bypass Levee crown roadway or access ramps shall be promptly repaired to the condition that existed prior to utilization.

TWENTY-SIX: Aggregate base material shall be compacted to a relative compaction of not less than 95 percent per ASTM Method D1557-91, with a moisture content sufficient to obtain the required compaction.

TWENTY-SEVEN: Prior to placement of fill against the levee slope and within 10 feet of the levee toe, all surface vegetation shall be removed to a depth of 6 inches. Organic soil and roots larger than 1-1/2 inches in diameter shall be removed to a depth of 3 feet.

TWENTY-EIGHT: Fill on the levee slope shall be keyed into the existing levee section with each lift.

TWENTY-NINE: The electric lines and air lines shall be installed through the levee section at a right angle to the centerline of the levee.

THIRTY: Electrical lines over 24 volts installed through the levee section and within 10 feet of the levee toes shall be encased in Schedule 40 PVC conduit or equivalent if not incased in concrete slurry.

THIRTY-ONE: Backfill material for excavations within the levee section and within 10 feet of the levee toes shall be placed in 4- to 6-inch layers, moisture conditioned above optimum moisture content, and compacted to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

THIRTY-TWO: Permanent, ferromagnetic, location markers shall be placed 10 feet from the landward levee toe of east levee unless there are permanent surface enclosures that adequately identify the alignment of the electric lines.

THIRTY-THREE: The permittee shall replant or reseed the levee slopes to restore sod, grass, or other non-woody ground covers if damaged during project work.

THIRTY-FOUR: If the location of the fish ladder result(s) in an adverse hydraulic impacts, the permittee shall provide appropriate mitigation measures, to be approved by the Central Valley Flood Protection Board, prior to implementation of mitigation measures.

THIRTY-FIVE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board at the permittee's or successor's cost and expense.

THIRTY-SIX: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted project if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the permitted project at the permittee's expense.

THIRTY-SEVEN: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated October XXXX, which is attached to this permit as Exhibit A and is incorporated by reference.



